

REMARKS

Claims 7, 16, 19, and 24 have been amended. No claims have been cancelled or added. Hence, Claims 1-24 are pending in the Application.

As a preliminary matter, receipt of the Notice of Draftsperson's Patent Drawing Review is acknowledged. Applicant recognizes that the present drawings are acceptable for examination purposes only. Formal drawings will be submitted after completion of the examination process upon the issuance of a Notice of Allowance.

SUMMARY OF REJECTIONS/OBJECTIONS

Claims 1 - 24 are objected because the claims do not begin on a separate sheet of paper. The specification has been amended so that the claims begin on a separate sheet of paper.

Claims 1 - 24 are rejected under 35 U.S.C. § 103(a) as being unpatentable over U.S. Patent No. 5,560,005, issued to Hoover et al. (*Hoover*). These rejections are traversed.

DESCRIPTION OF CITED ART

Because the rejections were based on *Hoover*, a description of *Hoover* is useful. *Hoover* describes a technique for managing and locating objects used to model relational data from customer databases. From each customer database, relational data is imported into a remote database associated with the customer database, and in particular, into objects stored in the remote database. The attributes of the objects are stored in object attribute tables. (Column 6, lines 41-56, Column 27, lines 11-18, line 27-36, Column 38, lines 30-50). Each object is associated with an object identifier. (Column 13, lines 36-39, Column 22, lines 17-33). Attributes of an object may be replicated, that is, a particular attribute of an object may be stored in an object attribute table on multiple remote databases. (Column 24, lines 44-60, Column 32, lines 118). An object

attribute table that stores data for an object does not necessarily contain data for all the attributes of the object, or the most current data for an attribute (Id., col. 27, lines 49 - 55).

An object broker maintains a map table. The object broker uses the map table to locate the object attribute tables that contain attributes for an object. The map table maps an object identifier to an object attribute table on one or more remote databases that contain the object. (Column 6, lines 33-42, lines 52-55, Column 24, lines 2-60, Column 35, lines 7-19).

In addition, the object broker maintains object index tables that map key values (i.e. attributes) to object identifiers. (Column 25, lines 10-15). The object broker uses the object index table to find an object identifier mapped to a key value, and uses the object identifier to find the object attribute tables and the locations mapped to the object identifier. (Column 53, lines 8-48).

Object identifiers are permanently assigned to objects when the objects are created in the object attributes tables. (Column 22, lines 41-46). Specifically, each remote database is assigned a range of unique numbers. As objects are created on a remote database system, each object is assigned a permanent object identifier from the unique range assigned to the remoter database system. (id.) The object identifiers are sequentially assigned, and are not in any way based on the attribute of the object being assigned an object identifier.

Finally, *Hoover* discusses a method of updating data in the object attribute tables. Specifically, a customer database system transmits an update message to the object broker. The object broker transmits the message to one or more remote database. (Column 35, line 52, Column 36, line 34)

CLAIM 1, 16, AND 20

Claims 1 and 20 recite:

reading data from one or more rows of the set of one or more tables;
generating an object Id based on values from said one or more rows; and
presenting data from said one or more rows as an object having said object id.

Claim 16 recites:

said processor configured to read data from one or more rows of the set of one or more tables;
said processor configured to generate an object id based on values from said one or more rows; and
said processor configured to present data from said one or more rows as an object having said object id.

In rejecting Claims 1, 16, and 20, the Office Action states the following.

Hoover did not teach, generating an object id based on values from one or more rows, but it would have been obvious to one having ordinary skill in the art at the time the invention was made to have one or more rows and to generate an object id based on values from the rows because a relational database consists of tables of rows and columns that define a relationship between things in each including one or more object attributes employed by users to identify object instances. (page 2, section 3)

The Office Action admits Hoover does not disclose generating an object id based on data from rows, and, in fact, offers no evidence that the step is disclosed or suggested by any other reference. Rather, the Office Action asserts that it is known that rows and columns contain attributes used to identify object instances. Consequently, the Office Action makes an argument for obviousness that requires two inferences. First, because it is known that rows and columns contain attributes that may be used to identify an object, that it is obvious to one skilled in the art to generate object ids based on data from rows. Second, that it is obvious to combine this inferred step with the step of presenting data from rows as an object having an object id. Applicant respectfully disagrees.

The Federal Circuit has stated that “[b]road conclusory statements regarding the teaching of multiple references, standing alone, are not ‘evidence.’” *In re Dembiczak*, 50 USPQ.2d 1614 (1999 WL 246572, page 4 (Fed. Cir. April 28, 1999)). More significantly, the Federal Circuit further instructed that the “range of sources available, however, does not diminish the requirement

for *actual evidence*. That is, the *showing must be clear and particular*.” *Id.* (emphasis added).

The Federal Circuit explained that “particular factual findings” should be made to demonstrate the propriety of an obviousness analysis, including “the identification of the relevant art, the level of ordinary skill in the art, the nature of the problem to be solved, or any other factual findings that might serve to support a proper obviousness analysis.” *Id.* at 4, 5.

The Office Action states that it is within the general knowledge of one skilled in the art that rows and columns contain attributes used to identify object instances. However, the Office Action fails to provide any evidence or reason to clearly and particularly show why this general knowledge would lead to generating object identifiers based on data from rows.

Moreover, even if it is assumed that it is obvious to one skilled in the art to generate object identifiers from rows, the Office Action must still provide *actual evidence* and a *clear and particular showing* of why it would be obvious to form a combination that includes this step and the teachings of Hoover. Hoover teaches a very different technique for generating object identifiers. Nevertheless, the Office Action failed to provide any reason of why it would be obvious to form this combination, despite having formed it by combining a step that had to be inferred from general knowledge with a reference that teaches a fundamentally different technique for creating object identifiers. Even more, the Office Action fails to provide any *actual evidence* and a *clear and particular showing* of why this combination is obvious. *Dembiczak* requires this sort of evidence and showing; the Office Action has failed to provide it. Therefore, it is respectfully submitted that the Office Action has failed to show that the limitations of Claims 1, 16, and 20 are obvious.

Applicant further believes that such a showing is not possible under Hoover because

Hoover teaches away from generating object identifiers based on data from rows. In *Hoover*, object identifiers are generated before an object is instantiated. Specifically, a predetermined set of object identifiers are generated. When an object is instantiated, it is sequentially assigned an identifier from the set. An entry is then created in a table that maps the object id to the object. A system that expressly generates object identifiers before the objects are instantiated, before it can know what rows contain the attribute values of the objects, teaches away from generating an object id based on data from rows.

Lastly, as stated in *Dembiczak*, “it is very easy to fall victim to the insidious effect of the hindsight syndrome where that which only the inventor taught is used against its teacher.” The Federal Circuit further stated that the best defense against hindsight-based obviousness is the requirement for a showing of a teaching or motivation to combine prior art references.

Here, the Office Action has failed to identify why a step should be inferred from the general knowledge held by one skilled in the art. Even more, the Office Action fails to provide any teaching or motivation of why that inferred step should be combined with Hoover, a reference that clearly teaches away from the step inferred by the Office Action. Instead, the Office Action has used hindsight to presume a certain feature in an attempt to provide a valid obviousness rejection under 35 U.S.C. § 103(a). Further, evening assuming that the combination of Hoover and the general knowledge of the art teaches each and every element of the claimed invention, which they clearly do not, without the showing of a motivation to combine, a rejection based on a *prima facie* case of obviousness is improper. *In re Rouffett*, 149 F.3d 1350, 1357, 47 USPQ2d 1453, 1457-58 (Fed. Cir. 1998). Here, the Office Action Examiner has provided no proper showing that there was a motivation to combine these references.

CLAIM 7 and 19

Claims 7 and 24 recite:

wherein said plurality of fields includes a field from each of a plurality of rows from said set of one or more tables;
generating a column object based on said first set of data; and
presenting a second set of data from said set of one or more tables as said object **that has said column object as an attribute.**

Claim 19 recites:

wherein said plurality of fields includes a field from each of a plurality of rows from said one or more tables;
said processor configured **to generate a column object** based on said first set of data;
and
said processor configured to represent a second set of data from said set of one or more tables as said object **that has said column object as an attribute.**

Hoover does disclose returning data derived from a relational database as object oriented data. However, Claims 7, 19, and 24 are not claiming the general notion of presenting relational data as object oriented data. Claims 7, 19, and 24 are more specific. In particular, Claims 7, 19, and 24 recite a system for (1) generating a column object based on data read from a plurality of fields from a plurality of rows and (2) presenting the column object as an attribute of another object. As the Office Action admits, *Hoover* does not discuss presenting column objects as attributes of another object, let alone generating such a column object based data from a field of a row. Therefore, *Hoover* cannot possibly disclose or suggest in any way presenting data as objects that have, as an attribute, a column object, where the column object is based on a plurality of fields from a plurality of rows. Reconsideration of the rejection of Claims 7, 19, and 24 and

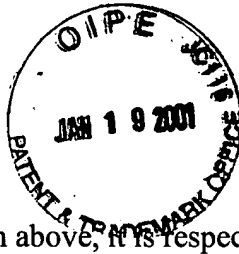
allowance of these claims is respectfully requested.

DEPENDANT CLAIMS

The pending dependant claims are Claims 2-6 (which depend on Claim 1), Claims 8-15 (which depend on Claim 7), Claims 17-18 (which depend on Claim 16), and Claims 21-23 (which depend on Claim 20). Each of the dependant claims depends on an independent claim and contains all the limitations of its respective independent claim. Therefore, each of the dependent claims are patentable for at least those reasons its respective independent claim is patentable. Reconsideration of the rejection of the dependent claims and their allowance is respectfully requested.

In addition, the dependent claims contain additional limitations that independently render them patentable. For example, Claim 11 recites “generating said collection object as a nested table.” *Hoover* does not discuss objects that are nested tables, let alone disclose or suggest in any way column objects as both nested tables and attributes of another object. Neither has the Office Action provided any evidence that clearly and particularly shows nested tables, let alone a motivation for combining them with Hoover.

Claim 10, recites “generating said collection object as a list of elements belonging to a single data type.” *Hoover* does not disclose or suggest in any way column objects that are typed as a list of elements belonging to a single data type, let alone such column objects being attributes of another object. Neither has the Office Action provided any evidence that clearly and particularly shows column objects as a list of elements belonging to a single data type, let alone a motivation for combining such column objects with Hoover.



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For the reasons set forth above, it is respectfully submitted that all of the pending claims are now in condition for allowance. Therefore, the issuance of a formal Notice of Allowance is believed next in order, and that action is most earnestly solicited.

The Examiner is respectfully requested to contact the undersigned by telephone if it is believed that such contact would further the examination of the present application.

Respectfully submitted,

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